

A3
engaged to create a frictional braking force; and

selectively and frictionally engaging said clutch member plates to impart said created frictional braking force to said rotor assembly effective to further lower said speed of said engine.

REMARKS

The Applicants' undersigned attorney thanks the Examiner for a kind and thorough review of the Application. For the following reasons the Applicants' undersigned attorney asserts that pending claims 1 - 19 are not anticipated or rendered obvious by the prior art of record.

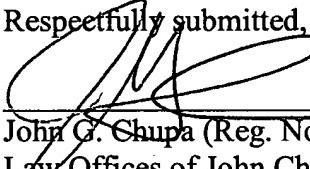
The Applicants have amended independent claims 1, 8, and 14 to more clearly show the novel structural arrangement of the invention disclosed by the Pending Application. Namely, these claims have been amended to include the novel structural limitations that the clutch assembly is coupled to the generator and (when engaged) provides a braking torque to the generator which increases and augments the torque (i.e., the claimed reaction torque) provided by the generator. This clutch assembly is effectively a brake which mechanically "grabs onto" the rotor of the generator and acts to slow down the rotation of the generator. None of the references of record disclose or suggest that a clutch assembly should be mounted upon the generator to act as a mechanical brake to supplement the torque provided by that generator.

Claims 8 and 14 have been further amended to show that the clutch assembly comprises two distinct plates, wherein the friction plates are fixed within the vehicle to prevent their rotation (i.e., so the clutch assembly may function as a brake) while the divider plates are coupled to and rotate with the rotor portion of the generator. These non-rotating friction plates

clearly demonstrate that the clutch assembly claimed in the Pending Application acts as a brake and not as a "traditional" clutch which is disclosed by the references of record (i.e., a clutch which couples a first rotating member (such as engine 1 of Fujisawa) and a second rotating member (such as motor 3 of Fujisawa)).

It should be readily appreciated that none of the art of record disclose, suggest, or render obvious any of these novel limitations and therefore, the Applicants' undersigned attorney respectfully asserts that the pending Application overcomes the Examiner's rejections and that the pending claims are in condition suitable for allowance. Such allowance is respectfully requested. If the Examiner has any further questions regarding this matter, please call the Applicants' undersigned attorney at (248) 865-9588.

Respectfully submitted,


John G. Chupa (Reg. No. 33,483)
Law Offices of John Chupa & Associates, P.C.
31313 Northwestern Hwy., Suite 205
Farmington Hills, MI 48334
Attorney for Applicants

"MARKED UP" VERSIONS OF AMENDED CLAIMS

Claim 1 "marked up" version

A hybrid electric vehicle drive system comprising:

an engine having an output shaft which rotates at a first speed;

a generator which is operatively coupled to said engine which selectively produces a reaction torque, effective to control said first speed; and

a clutch assembly which is [selectively] coupled to said generator, wherein said clutch assembly is selectively engaged to provide a braking torque to said generator and which is effective to selectively augment said reaction torque of said generator, thereby selectively increasing said reaction torque applied to said output shaft by [cooperating with] said generator to control said first speed.

Claim 8 "marked up" version

An apparatus for use within a hybrid electric vehicle including an engine which operates at a first speed, said apparatus being effective to control said first speed and comprising:

a generator including a stator assembly and a rotor assembly which is operatively coupled to said engine, said generator being effective to selectively provide a first torque through said rotor assembly, said torque being effective to control said first speed; and

a clutch assembly having at least one friction plates which are fixedly coupled to said vehicle and which are rotationally stationary and at least one divider plates which are coupled to said rotor assembly and which selectively and frictionally engage said at least one friction plates [which selectively engages said rotor assembly] effective to provide a second torque through said rotor assembly, said second torque being effective to augment said first torque, thereby further

controlling said first speed.

Claim 14 "marked up" version

A method for controlling the speed of an engine within a hybrid electric vehicle including a generator having a rotor assembly which is operatively coupled to said engine, said method comprising the steps of:

selectively activating said generator effective to produce a negative torque which lowers said speed of said engine; [and]

providing a clutch member having non-rotating friction plates and divider plates which are coupled to said rotor assembly, wherein said plates of said clutch member may be operatively engaged to create a frictional braking force; and

selectively and frictionally engaging said clutch member plates to impart said created frictional braking force to said rotor assembly effective to further lower said speed of said engine.



CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.8

I hereby certify that the foregoing Preliminary Amendment and Response to Office Action Accompanying a CPA is being deposited with the United States Postal Service in an envelope as First Class Mail addressed to the Assistant Commissioner for Patents and Trademarks, Washington, DC 20231 on this 6 day of November 2002.

By: SC

Steve Clemons

For:

Law Offices of John Chupa & Associates, P.C.
31313 Northwestern Hwy., Suite 205
Farmington Hills, MI 48334